TFA

HiTRAX

Wireless Heart Rate Monitor

User manual
(HiTRAX LIMIT)

TFA SL382 MANUAL (ENG)
SIZE : W88 x H148 (mm)
BY X H HUANG 20/05/09

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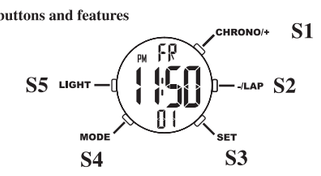
1. Introduction

We would like to congratulate you on purchasing the **HiTRAX LIMIT**. The built in sports functions such as heart rate monitor with chest strap, your personal training zones, as well as the stopwatch with lap times will assist you inefficiently organising your training. Please pay special attention to the important information heart rate monitoring in chapter 3. We also recommend that you consult your doctor or training consultant in order to determine your ideal training heart rate.

2. Information regarding functions and features of the watch

Activate the watch
If your watch does not show any numbers on the display after purchasing, then it has to be activated first. In order to do this, please press and hold the CHRONO and MODE buttons simultaneously until numbers appear on the display.

Operating buttons and features



The heart rate is monitored with the provided chest belt; the pulse function is also equipped with a programmable training zone with an alarm signal.

The watch has 3 operating modes: time, heart rate and stopwatch.

All buttons have a beep tone for confirmation. If there is no beep then this button does not have a function for the mode in effect or the word "Hold" will appear. In this case please continue to press the button until you hear a beep and the elements to be set appear on the display.

Battery:
CR2032 (3V button cell), one each in watch and belt

Display:
LCD with blue EL backlight (activated for 3 seconds by pressing button)

Operating temp:
0°C to 55°C

Water resistance:
The watch is water resistant against rainwater, water during showering and normal bathing and swimming. Do not, under any circumstances push any buttons when under water or use the watch for diving.

Warning:
Wild or jerky movements under water and also athletic swimming can cause unwanted activation of buttons allowing water to enter into the watch!

HRM functions:
Measuring range 30-240 heart beats per minute and corresponding display

Training monitoring:
Programming training zones with optional alarm function when beyond training zone.
Upper limit adjustable from 31-240, lower limit from 30-239.

Watch functions:
Display of hours, minutes and seconds (12 or 24 hr format).
Calendar with month, day and weekday for the years 2000-2099.

Stopwatch:
Stopwatch with 1/100 resolution for the first hour thereafter 1 second resolution.

LAP (lap time) function:
Time measuring up to 99 hours 59 minutes 59 seconds.

3. Important information for heart rate monitoring

General information
- Please consult your doctor for your ideal and non-harmful training information (maximum pulse rate) if you have problems with your heart or have, in your lifetime, had a medical intervention on your heart.
- If you have just begun your training or are you planning on beginning regular training we strongly recommend that you set up a trainings plan with a doctor or fitness coach.

Heart rate monitoring with a chest belt
For persons with intensive physical activities (sports such as cycling, jogging etc.) and trainings where a focus is placed on the use of training zones, using a heart rate monitor is of great value.
Following rules apply hereby:
- The wireless pulse rate transmission distance from the chest belt to the watch is up to maximum 60 cm (that means approximately arm's length).
- Monitoring requires a good contact of the measuring surface to your body. The belt must be well attached to the body (so that the transmitter containing the battery is in the middle of the body or rather over the heart in the upper part of the chest muscle and just below the base of the breastbone). Avoid areas with a lot of hair.
- Moisten the contact surfaces (left and right of the transmitter) with a conductive fluid (contact gel is ideal, sweat or saliva. Normally tap water is also suitable.)
- In a dry and cold climate it may take a while for the transmitted values to become stable. This problem will resolve itself as soon as you begin to sweat from physical activity.

Incorrect or missing transmission of data can be caused by the following:
- The chest belt has insufficient contact with the body (skin is too dry or chest belt does not fit correctly)
- Weak or empty batteries in the chest belt or in the watch
- Your heart rate is under 30 beats per minute
- Electro magnetic disturbances in the area (transformer station, electrical overland lines, thermionic screens from PCs and TVs, electric motors, in the car etc.)
- Please note that the transmission distance of approximately 60 cm from a transmitter belt of a person in your immediate area can also be received on your watch. The overlapping of the signal from your belt and the foreign belt usually leads to very high monitored rates. This is also possible with chest belts from other brands! A bit of extra distance between you and the other person or wearing the watch on the other wrist usually solves this problem.
- High amounts of chlorine in swimming pools and the salt content in sea water can, because of increased conductivity, affect monitoring.

4. Operating the watch

The **HiTRAX LIMIT** is a heart rate monitor with time / date and a stop watch. With its five push buttons it is very easy to operate.

4.1 Backlight
Press button S5 to activate the EL backlight for 3 seconds. If during this time another button is pressed, the light is re-activated for 3 seconds.

4.2 Button functions

S1 (CHRONO/+)
- Date display (in TIME mode)
- Activation of connection between chest belt and watch (in HRM mode)
- START/STOP for the stopwatch (in STW mode)
- "+" adjustments in setup mode

S2 (-/LAP)
- For activated stopwatch: to record lap times
- "-" adjustments in setup mode

S3 (SET)
- To get to setup mode (press and keep pressed as long as "Hold" is displayed)
- To RESET the stopwatch and to delete (!) the 15 lap memory
- In setup mode to skip to next adjustment

S4 (MODE)
- To switch operating mode (switch function)
- In setup mode: Accept settings and end setup mode

S5 (LIGHT)
- Press shortly: EL backlight is activated for 3 seconds
- Light remains activated as long as another button is pushed within the 3 seconds. During this time other buttons can also be operated.

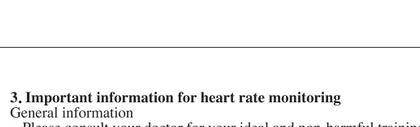
4.3 Operating modes

In order to reach the next operating mode, press the S4 button.

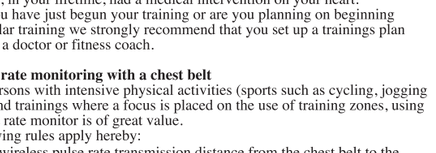
S4 →
- TIME MODE (TIME)
- ↓ S4
- HEART RATE MONITORING (HrM)
- ↓ S4
- STOPWATCH (STW)

4.4 Programming the time

- Press the S4 (MODE) button as shown above in order to reach the TIME operating mode. "TIME" will be indicated in the display for one second.



- If you press the S1 button while still in the "TIME" operating mode the date (weekday, month and day) will be displayed. Pressing the S1 button again will return to the time display.



- To set the time, press and hold the S3 button (SET) for 2 seconds (the word "Hold" will appear) to get to the setup mode. The year display will begin to blink allowing you to set the time and the date.
- Press the S1 (+) or S2 (-) button to set the year. Press and hold the S1 or S2 button for a faster changing of values.

- Press the S3 (SET) button to conduct all other programming, the sequence is defined as follows:

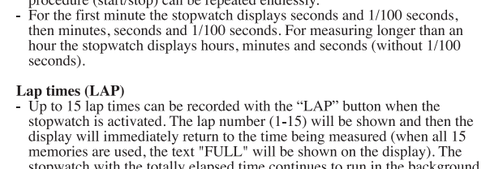
S3 YEAR → S3 FORMAT DATE → S3 MONTH → S3 DAY → S3 MINUTE → S3 HOUR → S3 12/24H → S3

Information:
- The year can be set from 2000 to 2099.
- The date format is D-M or M-D (D=Day, M=Month)
- As soon as you have programmed everything press the S4 button to leave the setup mode. The watch will then begin running at 00 seconds, if the time has been re-set.
- The weekday in the date display is automatically determined by the date entered. The display is in English (MO, TU, WE, TH, FR, SA, SU).

Please note:
If in the setup mode, for the duration of approx. 1 minute, no button is pressed, the watch automatically switches back into the time operating mode and the settings will be taken over.

4.5 Programming the training zone
In order to monitor the heart rate with the training zone you must follow the setup below. But please note: If you do not want a training zone then you can go directly to chapter 4.6.

Programming information for pulse monitoring with training zones:
- Press the S4 button until you reach the heart rate monitoring mode, in the display "HrM" appears for 1 second.



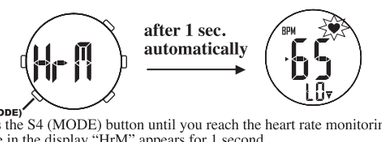
- Then press and hold the S3 button for 2 seconds (the word "Hold" appears) to get to the setup mode. The upper limit (HI) begins to blink and can be programmed.
- Press the S1 or S2 button to program the limit. Press and hold the S1 or S2 button for a faster changing of values.
- Now press the S3 button to program the lower limit (LO) and then again to set the acoustic training zone alarm ("BEEP") on (ON) or off (OFF).

S3 → Upper limit → S3 → Lower limit → S3 → Sound on/off

- The acoustic training zone alarm "BEEP" is switched on (ON) or (OFF) with the S1 button.
- As soon as you have made all adjustments leave the setup mode with the S4 button.

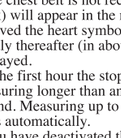
Please note:
1. The programming of the limit values lies between 30 and 240 BPM (heartbeats per minute). Attention: The upper limit must be higher than the lower!
2. If in the setup mode, for the duration of approx. 1 minute, no button is pressed the watch automatically switches back into the heart rate monitoring mode.
3. To use the heart rate monitoring chest belt please read chapter 3 ("Important information on heart rate monitoring").

4.6 Heart rate monitoring

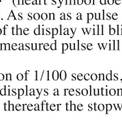


- Press the S4 (MODE) button until you reach the heart rate monitoring mode in the display "HrM" appears for 1 second.
- The heart symbol blinks when a signal is being received from the chest belt and your heart rate is shown in the middle of the display. If the heart symbol does not blink, please read section 3 carefully.
- If you have activated the training zone alarm 2 "beep signals" will sound every 14 seconds if your pulse drops below the "lower limit" and every 14 seconds 4 "beep signals" if your pulse goes over the "upper limit".

Following signals appear on the display for HI/LO:



Pulse under the lower limit



Pulse over the upper limit

Button S2 (LAP):
Each time you press this button you can view the lap times from 1 - 15. The heart rate shown in the display is the pulse measured at the end of the corresponding round.

Button S4 (MODE):
After reading the lap times you can return to the end time by pressing this button twice.

Button S3 (SET):
All recorded lap times and elapsed time is deleted!

Pulse display:
In this mode the heartbeats per minute are also shown on the top line. When the pulse signal is received by the chest belt the heart symbol blinks and your pulse is displayed. It is irrelevant hereby whether the stopwatch is running or not.
If you have activated the training zone alarm 2 "beep signals" will sound every 14 seconds if your pulse drops below the "lower limit" and every 14 seconds 4 "beep signals" if your pulse goes over the "upper limit".

Pulse under the lower limit

Pulse over the upper limit

Please note:
1. If the chest belt is not receiving a signal, "- - -" (heart symbol does not blink) will appear in the middle of the display. As soon as a pulse signal is received the heart symbol on the upper right of the display will blink and shortly thereafter (in about 6-10 seconds) the measured pulse will be displayed.
2. For the first hour the stopwatch has a resolution of 1/100 seconds, for measuring longer than an hour the stopwatch displays a resolution of one second. Measuring up to 24 hours is possible, thereafter the stopwatch stops automatically.
3. If you have deactivated the training zone alarm no alarm will sound. The warning displays (▲ ▼) will still appear.

4.8 "RESET" the watch
Simultaneously press and hold the S1, S2, S3, and S4 buttons for approx. 3 seconds.
The watch, or rather the processor in the watch, will be restarted. After this all display elements will appear followed by the display "0:00".

Attention: All settings will be lost and must be reset as described in this user manual.
A reset is recommended directly after changing the battery in the watch or if the watch, for unknown reasons, does not function correctly.

5. Care instructions and battery changing

The **HiTRAX LIMIT** is a high quality instrument which has been produced in a modern, hard wearing, and lightweight design completely fulfilling all common sports requirements. You should still avoid rough mechanical exposure like blows or scratching/scouring contacts.
It is recommended, after each training and competition, to carefully clean the watch and the chest belt with warm water perhaps also with a bit of skin kind soap, rinse off and cleanse from sweat and skin particles. Then please rinse well and dry with a soft towel. At no time should aggressive cleaning solutions be used!

According to use it may sooner or later become necessary to change the batteries. You can change the batteries in the watch and in the belt yourself. In each case you must pay close attention that on the watch as well as on the belt the seals are replaced correctly. Putting in the screws and watchband holders requires a bit of routine and patience, any damages caused to the instruments hereby do not fall under the warranty.
In case of doubt we recommend having the batteries exchanged in a good specialist shop.

Use alkaline batteries only. Observe correct polarity. Low batteries should be changed soon to avoid the damage resulting from a leaking battery. Batteries contain harmful acids. Wear protective glasses and gloves when handling with leaked batteries.

Attention:
Please do not dispose of old electronic devices and empty batteries in household waste. To protect the environment, take them to your retail store or to appropriate collection sites according to national or local regulations.

6. EU declaration of conformity

Herewith we declare, that this wireless transmission device does comply with the essential requirements of R&TTE Directive 1999/5/EC.

A copy of the signed and dated Declaration of Conformity is available on request via info@tfa-dostmann.de.

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RoHS CE